Recursive Gravity Research Journal

Version 0.1

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Purpose
This journal records speculative theoretical ideas concerning gravity, recursive geometry, and possible organizing principles in nature. These are hypotheses intended for mathematical development and experimental testing, not established scientific conclusions.

Core Observations
1. Many natural systems exhibit recursive or fractal-like geometry (rivers, streams, lightning, trees, vascular networks).
2. Many evolve along a dominant directional gradient.
3. Gravity determines the downward direction for rivers and waterfalls.
4. Similar geometries appear across systems governed by different physical forces.

Working Hypotheses
H1. Loop Gravity: Gravity may emerge from recursive microscopic structures.
H2. Gravity Condensation: Stable curvature forms through increasing coherence.
H3. Gravity Cycles: Gravity around a body is maintained through recursive cycles.
H4. Gravity Climate: Moving masses create a continually changing gravitational environment.
H5. Nested Gravity Wells: Gravity wells form interacting hierarchies across scales.
H6. Recursive Geometry Principle: Similar branching geometry may reflect common mathematical organization.
H7. Electromagnetic Relationship (speculative): Electromagnetism may emerge from a deeper geometric structure related to gravity.

Research Questions
Can interacting gravity wells be modeled recursively? Can one mathematical rule generate branching patterns across different physical systems? Can the framework reproduce established observations and make new, testable predictions?

Research Philosophy
Geometry is treated as evidence that may contain information about underlying mechanisms. Recurring patterns motivate the search for common mathematical principles, while requiring quantitative testing before drawing conclusions.

Next Steps
Define mathematical variables, simulate interacting gravity wells, compare predictions with observations, and identify experimentally testable differences from existing theories.